CONTENTS

Volume 5, Number 4, October 2016

Mechanical Design-Manufacture and Automation
Knowledge-Based Aerodynamic Estimation of Airships ............................................................... 239
  Khurram Rashid, Riaz Ahmad, Adnan Maqsood, and Farrukh Mazhar

A Review of Arc Brazing Process and Its Application in Automotive ........................................... 246
  Yong Kim, Kiyoung Park, and Sungbok Kwak

Failure Analysis of Hydraulic Rotary Drill Rods in a Limestone Mine ........................................ 251
  Anirut Chaijaruwanich and Chatchanok Thongthip

Compliance Analysis of A Horizontal Arrangement Parallel Mechanism Considering Gravitational Effect... 255
  Peng Xu, Chi Fai Cheung, and Bing Li

  Chattan Sakaunnapaporn, Pornpote Piumsomboon, and Benjapon Chalermsinsuwan

Study on Separation Procedure of Predominantly Overlapped Two Absorption Signals for Concentration Measurement in TDLAS Method .............................................................................. 264
  Miyeon Yoo, Saerom Maeng, Sunghyun So, and Changyeop Lee

Damage Curve Determination of Dual Phase Steel Based on GTN Mode-I Failure Criteria .................. 268
  Chananya Netrasiri and Surasak Suranunthchai

Optimization of the Spring-Back in Roll Forming Process with Finite Element Simulation .................. 272

A Novel Method of CoW Bonding for High Density Ultra-Fine Pitch IC Stacking Application ............ 276
  Ling Xie, Sunil Wickramanayaka, Jerry Aw Jie Li, Daniel Ismael Cereno, and Yong Liang Ye

Assembly Design Semantic Recognition Using SolidWorks-API ....................................................... 280
  Baha A. Hasan, Jan Wikander, and Mauro Onori

Control System and Robot
Robotic Finger Rehabilitation Support Device for Home Use—An Analysis of the Effect of Finger Rehabilitation for the Upper Limb Function Recovery ........................................................................... 288
  Kaori Chiba, Akihiro Kakimi, Naoyuki Ogura, Yuji Ishida, Yuta Furudate, Kazuki Yamamoto, and Sadayoshi Mikami

Current Situation and Future of Chinese Industrial Robot Development .......................................... 295
  Li Zheng, Shuhua Liu, and Siyu Wang
Development and Research of Path-Planning Module for Control System of Underwater Vehicle ..................301
Vyacheslav Pshikhopov, Boris Gurenko, Igor Shapovalov, and Maksim Beresnev

Kinematics Analysis of A Robotic Zipper Prototype for Miniaturization ..................................................305
Mohamad Zairi Baharom, Frank Delbressine, and Loe Feijs

Materials Science and Technology
Optimization of Surface Roughness in Drilling of GFRP Composite Using Harmony Search Algorithm ........311
Mohammad Ahsan Habib, Md. Anayet U. Patwari, Akib Jabeed, and M. Nabil Bhuiyan

Cavitation in Friction Stir Processing of Al-Zn-Mg-Cu Alloy .................................................................317
Vivek V. Patel, Vishvesh J. Badheka, and Abhishek Kumar